

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P931014

Luminaire Tested: DFN2DS-SQ3F0-100DS835-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931014
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-SQ3F0-100DS835-RLL
Description: 3 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

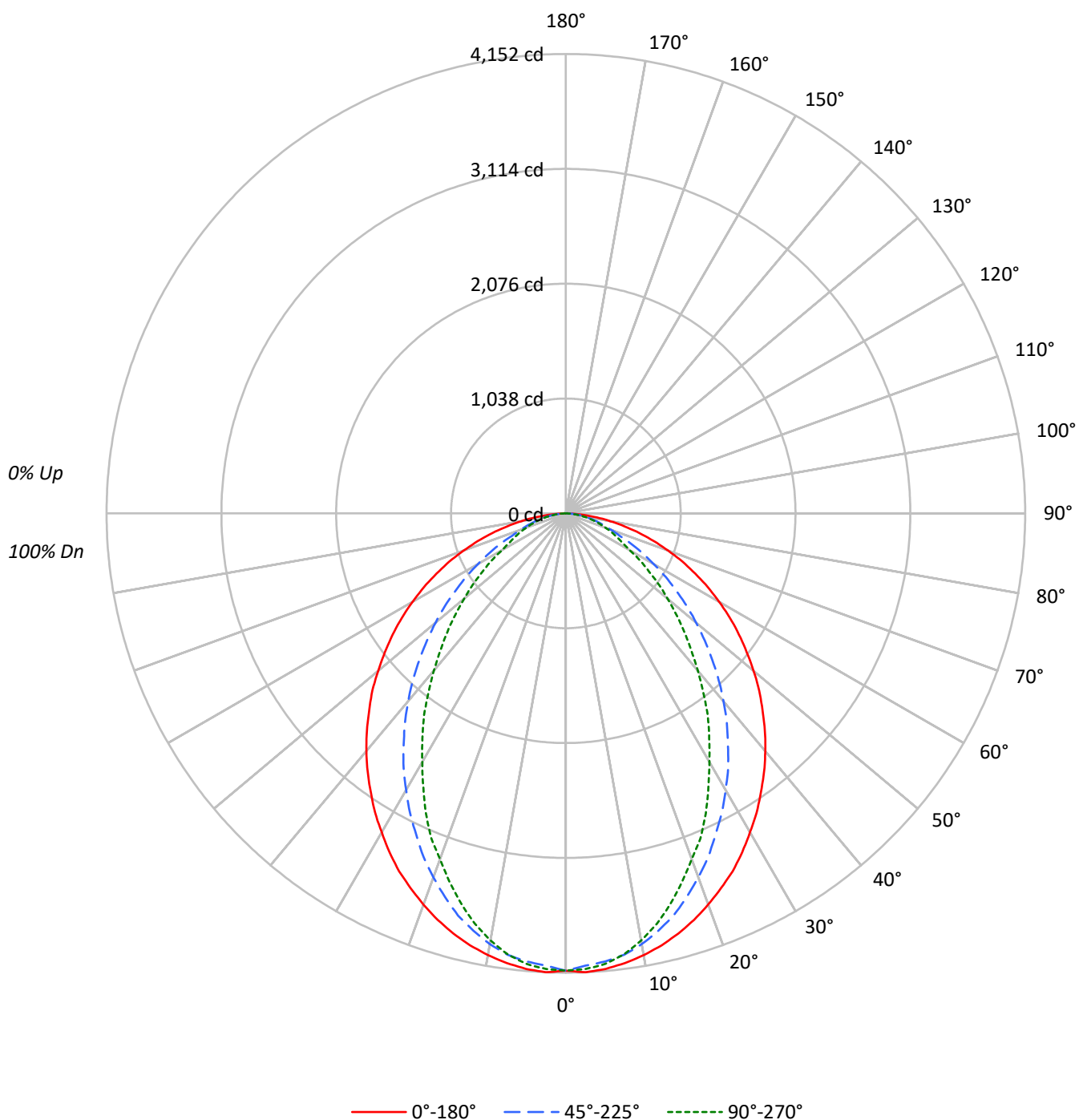
Lumens per Lamp: N/A
Luminaire Lumens: 8500.0 lumens
Efficiency: N/A
Efficacy: 81.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 104.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9781
Total Harmonic Distortion (THDi): 0.075
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P931014

CATALOG NUMBER: DFN2DS-SQ3F0-100DS835-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P931014

CATALOG NUMBER: DFN2DS-SQ3F0-100DS835-RLL

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4736	4736	4736
5°	4754	4676	4702
10°	4717	4600	4561
15°	4663	4463	4335
20°	4588	4269	4054
25°	4511	4048	3783
30°	4404	3820	3434
35°	4301	3574	3128
40°	4196	3317	2775
45°	4073	3031	2454
50°	3947	2740	2140
55°	3818	2428	1838
60°	3668	2100	1526
65°	3499	1764	1389
70°	3295	1453	1278
75°	3046	1325	1193
80°	2689	1184	1087
85°	2113	933	933

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4073 cd/sqm

TEST NUMBER: P931014

CATALOG NUMBER: DFN2DS-SQ3F0-100DS835-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	387.3	4.6
10°-20°	1063.3	12.5
20°-30°	1492.9	17.6
30°-40°	1627.4	19.1
40°-50°	1495.7	17.6
50°-60°	1174.7	13.8
60°-70°	764.6	9.0
70°-80°	393.6	4.6
80°-90°	100.5	1.2
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2943.6	34.6
0°-40°	4571.0	53.8
0°-60°	7241.3	85.2
0°-90°	8500.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8500.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4133	4133	4133	4133	4133	
5°	4133	4114	4066	4099	4088	392
15°	3931	3890	3763	3692	3654	1108
25°	3568	3448	3202	3048	2992	1641
35°	3075	2884	2555	2319	2236	1924
45°	2514	2263	1870	1604	1515	1941
55°	1911	1620	1216	991	920	1708
65°	1290	987	651	524	512	1279
75°	688	426	299	273	269	728
85°	161	82	71	71	71	193
90°	0	0	0	0	0	

TEST NUMBER: P931014

CATALOG NUMBER: DFN2DS-SQ3F0-100DS835-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4133.0	4133.0	4133.0	4133.0	4133.0
2.5°	4151.6	4133.0	4091.7	4129.4	4121.9
5°	4133.0	4114.3	4065.5	4099.3	4088.1
7.5°	4099.3	4077.0	4024.6	4039.3	4020.7
10°	4054.4	4028.2	3953.6	3942.1	3919.9
12.5°	3998.5	3964.7	3863.5	3841.3	3800.0
15°	3931.0	3889.7	3762.7	3691.7	3654.4
17.5°	3852.4	3792.5	3635.4	3553.2	3493.3
20°	3762.7	3687.7	3500.8	3407.6	3325.0
22.5°	3665.5	3579.4	3362.3	3235.4	3179.4
25°	3568.3	3448.5	3201.6	3048.4	2992.1
27.5°	3452.4	3325.0	3052.0	2876.2	2790.1
30°	3329.0	3186.5	2887.3	2696.9	2595.7
32.5°	3209.2	3036.9	2730.6	2506.0	2412.3
35°	3074.6	2883.8	2554.8	2319.1	2236.5
37.5°	2943.7	2737.7	2390.1	2131.8	2038.5
40°	2805.2	2581.0	2217.9	1952.4	1855.2
42.5°	2663.1	2423.8	2046.1	1769.1	1675.8
45°	2513.5	2262.7	1870.3	1604.4	1514.7
47.5°	2371.5	2106.0	1702.0	1436.1	1354.0
50°	2214.3	1948.8	1537.3	1279.0	1200.8
52.5°	2060.7	1780.2	1380.2	1133.3	1062.3
55°	1911.1	1619.5	1215.5	991.3	920.2
57.5°	1758.0	1458.7	1069.9	860.3	800.4
60°	1600.8	1301.6	916.3	725.8	665.9
62.5°	1447.6	1148.4	785.3	606.0	576.2
65°	1290.5	987.3	650.8	523.8	512.3
67.5°	1140.9	837.7	523.8	459.9	448.8
70°	983.7	692.1	433.7	396.4	381.4
72.5°	834.1	557.1	362.7	332.9	325.4
75°	688.1	426.2	299.2	273.0	269.4
77.5°	542.5	302.8	235.7	220.6	213.1
80°	407.5	217.1	179.4	164.7	164.7
82.5°	284.1	146.0	123.4	115.9	115.9
85°	160.7	82.1	71.0	71.0	71.0
87.5°	59.9	29.8	29.8	26.2	26.2
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P931014

CATALOG NUMBER: DFN2DS-SQ3F0-100DS835-RLL

CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	16.64	18.16	17.00	18.47	18.79	12.60	14.12	12.96	14.43	14.75
	3H	18.40	19.77	18.78	20.10	20.46	13.86	15.23	14.24	15.56	15.92
	4H	19.07	20.35	19.47	20.70	21.08	14.36	15.65	14.76	15.99	16.37
	6H	19.56	20.74	19.97	21.11	21.50	14.75	15.93	15.16	16.30	16.69
	8H	19.72	20.85	20.15	21.24	21.64	14.87	16.00	15.30	16.39	16.79
	12H	19.83	20.90	20.26	21.29	21.72	14.95	16.03	15.38	16.41	16.84
4H	2H	16.74	18.02	17.14	18.37	18.75	13.29	14.57	13.69	14.92	15.30
	3H	18.67	19.74	19.09	20.14	20.54	14.74	15.80	15.15	16.20	16.60
	4H	19.42	20.38	19.86	20.80	21.24	15.34	16.29	15.77	16.71	17.15
	6H	20.02	20.85	20.47	21.29	21.75	15.82	16.66	16.28	17.10	17.56
	8H	20.23	21.01	20.69	21.45	21.92	15.99	16.76	16.45	17.21	17.68
	12H	20.38	21.08	20.87	21.56	22.03	16.10	16.80	16.59	17.28	17.75
8H	4H	19.45	20.23	19.91	20.67	21.14	15.69	16.47	16.15	16.91	17.38
	6H	20.09	20.73	20.58	21.22	21.70	16.28	16.92	16.77	17.41	17.89
	8H	20.34	20.91	20.85	21.42	21.91	16.50	17.07	17.01	17.58	18.07
	12H	20.54	21.05	21.05	21.54	22.11	16.68	17.19	17.19	17.68	18.24
12H	4H	19.43	20.13	19.92	20.61	21.08	15.73	16.43	16.22	16.91	17.38
	6H	20.07	20.64	20.58	21.15	21.64	16.34	16.92	16.85	17.43	17.92
	8H	20.35	20.86	20.86	21.35	21.92	16.61	17.12	17.12	17.62	18.18